

# Factor Analysis on Brand Recognition and Image Purchases

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**Abstract-** *To predict consumers attached to the brand, research needs to be done to derive direct product-related behaviors that are relatively easy to observe and measure, in addition to conventional relation-oriented variables. In the end, if a consumer shows a particular behavior and can identify that they are brand attached, then it is more likely that they will be more attached to the brand along with the re-purchase, oral, or recommended behavior of the Big Data. The purpose of this study is to establish a link between the consumption selection criteria and the intent of buying back a smartphone. The intention of re-purchase is to continue to repurchase the brand and to delay the purchase of the smartphone until the brand's new product is released. When it resells Smartphones, it looked at price, marketing, business image, durability, and design of individual consumption options and how strongly consumers are considering these conditions. In addition, it tried to reflect the characteristics of consumers using iPhones and Galaxy phones, which account for a significant portion of the smartphone market.*

**Keywords-** *Repurchase behavior; Consumption selection criteria; Brand attachment*

## 1. INTRODUCTION

### 1.1 Necessity and Purpose of Research

iPhone users utilize Apple's app store for a variety of reasons, including automatic iOS (i.e., Apple's operating system) updates. After analyzing the data, the findings were summarized as follows. First, a positive relationship exists between brand attachment and brand attitude (Park, MacInnis, & Priester, 2008; Fedorikhin, Park, & Thomson, 2008)[10], suggesting that post-attachment behaviors, such as repurchase, conversion, recommendation, and advocacy, are related to the formation of brand equity (Park et al., 2010)[31]. However, behaviors such as purchasing, repurchasing, switching, word of mouth, and giving recommendations are shown to be related to other consumers. Therefore, along with the variables above, empirical research is needed to identify consumers who are attached to a brand and to identify direct product-related behaviors that can be measured and observed. Finally, if consumers show certain behaviors indicating brand attachment, then variables such as repurchase behavior, word of mouth, and giving recommendations shown in Big Data can be helpful in order to predicting consumer behaviors.

In the study of the product deformation behavior of consumers, it was shown that product attachment is related to the consumers' product deformation behaviors (Joo et al., 2013; Mugge, Schifferstein & Schoormans, 2010)[25]. In addition, consumers are more likely to purchase quality and necessary products. If a company engages in a marketing effort to increase the value of the consumers' experiences by providing more customized products in an attempt to entice them to form brand attachment, then the consumers can also change their own brands and create scarcity. In other words, if IKEA sells

inconveniences and forms a brand attachment, then it shows a brand attachment behavior that transforms the brand attached to the consumers themselves. The direct behaviors seen by consumers who are attached to the brand can be product use expansion and/or product upgrade behaviors. In other words, if a consumer feels an attachment to a product, then he or she will want to have a more personalized product, so that he or she can behave themselves to solve a functional problem for a product with a brand attachment (Mugge, Schoormans, & Schifferstein, 2005[26]; Mugge et al., 2010)[25].

Consumers who are attached to their own brands are willing to use the upgraded iPhone brand because they want to use their brand extensively to expand their use and continue to upgrade. In other words, for products attached to a brand after attaching to the brand, it can be said that it will try to maintain the higher capability through product upgrading and product upgrading by expanding the product use situation. In addition to such variables as repurchase, conversion, recommendation giving, and advocacy, which have been suggested by previous studies on brand attachment behavior, situation extension behavior and product upgrade behavior. This study first approaches the multidimensional approach by classifying product deformation behaviors as a single dimension in the existing research as external deformation and internal deformation. In addition, the relationship between brand attachment and product deformation behavior, product upgrade behavior, it also examines the moderating effects of innovation as a personal factor.

### 1.2 Research Problems

Research Questions 1: What difference does brand awareness bring to consumers?

Research Question 2: What difference does brand image level bring to consumers?

Research Question 3: What is the difference between brand image and a consumer's self-expression to the consumer?

Research Questions 4: What is the difference between brand recognition and repurchase?

## **2. THEORETICAL BACKGROUND**

### **2.1 Study on Brand Recognition**

Brand awareness refers to the ability of a consumer to recall or recall a particular brand in a product category. When consumers' involvement with products is low, high awareness becomes a very powerful marketing strategy that leads to the intimacy of consumers and to immediate purchases. A strong correlation exists between awareness and familiarity in daily life. Brand awareness is important because it is an essential condition for forming brand equity and brand power.

Two reasons exist for establishing high brand awareness (Nedungadi, 1990). The first is brand familiarity, which increases the preference and choice of the brand. The second is the creation of high-branded trademarks, which are preferentially included in the considered trademark group (Kwon, Jae-kyung, Lee, & Hyun-joo, 2010)[21].

### **2.2 Study on Brand Image**

Aaker (1991) stated that an awareness of brands formed by foster and powerful unique associations are embedded in consumers' memories (Keller, 1993) and consumers' perceptions of product attributes (Kim & Yeong-hoon, 2008)[18]. The psychological structure of consumers, which is formed by consumers' feelings and emotions about a brand combined with information related to a product (2012), is influenced by brand recognition. Consumers are influenced by various factors, such as logos, designs, quality, and moods, when forming a brand image (Kim, Byung-Soo, Yun-Mi, Moon, & Shin-Young, 2013). Brand image with positive affinity and affinity plays an important role in forming distinct brand equity (Keller, 1993)[15]. In addition, we provide judgment criteria that can be used to select products related to purchase motives for general consumers who do not have the sufficient ability to identify product quality characteristics (Dann, 1996)[8]. In recent years, the difference in quality among coffee shops has decreased and consumers' emotional purchases have increased (Kim & Byoung-Soo et al., 2013)[16]; the brand image of a specific brand as formed in the consumer's mind can have a big impact on expanding market share (Lee, Sang Hee, Kim, & Hyuksoo, 2016).

### **2.3 Consumer Self-Expression and Behavior**

According to Trammell and Keshelashvili (2005)[37], it is the process of continuously controlling and managing information to convey a certain image of oneself to others (Ellison et al., 2006[9]; Leary & Kowalski, 1990)[22]. In

other words, not only expressing self-image through self-expression, but also psychological attachment to object expressing self-image effectively (Onkvisit & Shaw, 1987)[29]. In addition, we attempt to express self-image through actions that modify and transform the object of attachment (Mugge et al., 2004)[24].

The term "behavioral intention" is called by various names depending on the study subject. For example, if the research subject is a product, then the purchase intention is repeated. If it is repeated, then the intention to repurchase a product or re-use a service The term is just the act of action (Choi, 2005)[6]. Behavioral intention can also be defined as the will and belief that consumers will express as a specific future action after they have formed an attitude toward the subject (Boulding et al., 1993; Yeon Hee Choi & Lee, 2013).

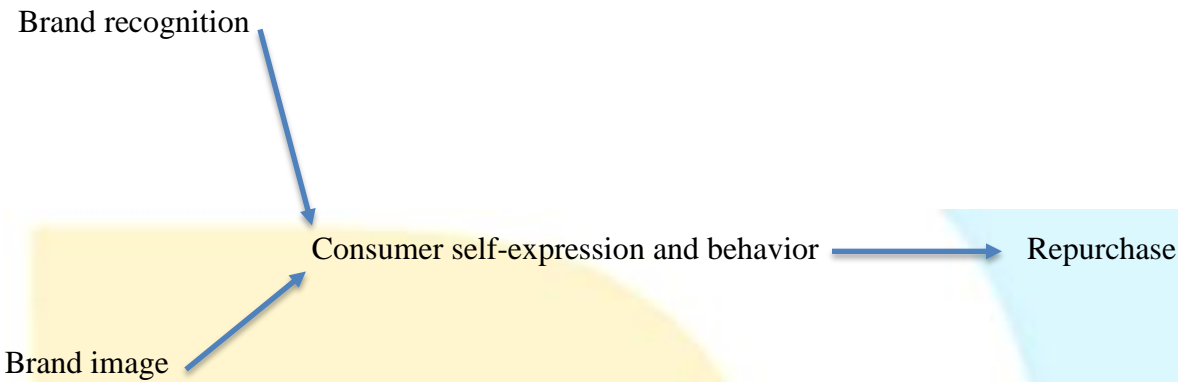
Previous researchers have presented various measurement components for behavioral intentions. It is the behavior of economic behavior and social behavior. The intent of a consumer's economic behavior impacts financial aspects, such as repurchase intentions, willingness to pay, and conversion behaviors. Social behavior intentions are a consumer's behaviors that affects the reaction of existing and potential customers, such as complaint behavior and word-of-mouth communication (Kim & Kyunghee, 2010)[17]. A study of hotel and restaurant studies (Tsaor et al., 2005)[38] showed that behavioral intention variables were measured by loyalty, conversion intention, intention to pay, external response, and internal response (Tsaor et al., 2005)[38], while another study showed it as being measured by the re-use of the item (Jigyewoong et al., 2014).

### **2.4 Research on Repurchase**

The purchasing decision-making process does not end with the purchase, but, rather, continues with the satisfaction or dissatisfaction experienced while using the purchased product or service, evaluation of the purchase decision by the customer, and determination as to whether to repurchase the product or service (Annika Raval, Christian Grönroos, 1996)[3]. Therefore, repurchase intentions should be studied as a resulting variable of satisfaction (Hong-Bin, 1997; Day & Ash, 1979; Gronhaug & Zaltman, 1981; Resnik & Harmon, 1983). Newman and Werbel (1973) found that satisfied customers were more likely to repurchase products and services than unsatisfied customers. Oliver (1980)[27] I have argued that the intention is higher. In addition, the results of previous studies have shown that satisfaction impacts repurchase intentions (Oliver & Linda, 1981)[28]; Bearden & Teel, 1983; Oliver & Swan, 1989, Bitner, 1990).

## **3. ANALYSIS RESULTS**

### **3.1 Research Model**



### 3.2 Hypothesis Setting

\* Hypothesis 1: Consumers reviewing repurchase consumption selection criteria will repurchase the brand in use.

1) Consumers who review the prices of products or services will always buy the brands they are using.

Consumers who review the prices of products or services will wait until new products or services in same category are available before making a purchase.

2) Consumers who review marketing will always buy the brands they are using.

Consumers who review marketing will wait until they have new brands in use without purchasing it.

3) Consumers who review corporate images will always re-purchase the brands they are using.

Consumers who review corporate images will wait until they have new brands in use and will not buy it.

4) Consumers who review durability will always buy the brands they are using.

Consumers who review durability will wait without purchasing new products from their brands until they are released.

5) Consumers who review designs will always buy the brands they are using.

Consumers who review designs will wait without purchasing new products from their brands until they are released.

\* Hypothesis 2: Consumers who strictly apply the repurchase consumption selection criteria will purchase the used brands again.

1) The more consumers apply prices strictly, the more likely they are to repurchase their brands.

The more consumers apply prices strictly, the less likely they will wait until brand new products in use are released.

2) Consumers who apply marketing strictly will always re-purchase the brands they use.

Consumers who apply marketing strictly will be less likely to wait until brand new products in use are released.

3) Consumers who apply corporate images strictly will always re-purchase the brands they are using.

Consumers who apply corporate images strictly will wait until they have brand new products in use until they release it.

4) Consumers who strictly apply durability will always repurchase their brands.

Consumers who strictly apply durability will wait until they have brand new products in use until they release it.

5) Consumers who apply designs strictly will always buy the brands they are using.

Consumers who apply designs strictly will wait until they have brand new products in use until they release it.

### 3.3 Results of the Analysis

#### 3.3.1 Repurchase selection criteria and repurchase intentions

##### (1) Repurchase selection criteria

Table 1 shows how the five criteria were considered when repurchasing smartphones. First, iPhone users are considering more on average than Galaxy on all 5 standards. Both the iPhone and Galaxy had the highest scores (4.143 and 3.118, respectively) on durability, and the lowest was the price. However, the average price difference between the iPhone and Galaxy was not statistically significant. Corporate image. durability. The design was statistically and significantly higher than the iPhone's Galaxy

Table 1

Standard	Survey Question	iPhone	Galaxy	F
Price	When I repurchase, the price of the brand overrides the quality.	3.184 (1.481)	2.882 (1.395)	1.10



Marketing	I tend to refer to a good display when repurchasing.	3.204 (1.708)	2.667 (1.291)	3.17*
Corporate Image	When I repurchase, I usually look at the attitude of the employees or the image of the company of a particular brand.	3.408 (1.870)	2.647 (1.440)	5.23**
Durability	When I repurchase, I am worried about whether I can use the product for a long time.	4.143 (1.947)	3.118 (1.547)	8.54***
Design	When I choose a brand, I prefer elegance and aesthetics.	4.020 (1.762)	2.941 (1.420)	11.42***
Total Frequency		49	51	100
*: <0.1, **: <0.05, ***: <0.01 Parentheses are standard deviations				

According to Table 2, the highest score was obtained by comparing the five criteria as reported by individual consumers. Of the 100 people surveyed, 49 were iPhone users and 51 were Galaxy users. No difference exists between the smartphone brands ( $\chi^2 = 0.601$ ). Thenumber of iPhone users who saw dual durability as

the top ranking was 21 and the number of Galaxy users was 18. However, there was no difference. In summary, there is no difference among the requirements of smartphone users among the various conditions, and smartphone users generally see common conditions.

Table 2

	Number of First-Choice Consumers		Remarks
	iPhone	Galaxy	$\chi^2$
Price	8 (10.3)	13 (10.7)	1.245
Marketing	8 (9.8)	12 (10.2)	0.810
Corporate Image	10 (8.8)	8 (9.2)	0.378
Durability	21 (19.1)	18 (19.9)	0.601
Design	20 (18.1)	17 (18.9)	0.600
*: <0.1, **: <0.05, ***: <0.01 Parentheses are the expected frequency			

However, since the selection criteria were almost similar in priority, the iPhone and Galaxy consumers cannot be regarded as having similar conditions because, even if the conditions for priority were the same, it is impossible to exclude the possibility of judging more closely or evaluating loosely all the criteria. The survey results show that the iPhone users scrutinized all of the selection criteria, while the Galaxy users did not. Therefore, when

you add all of the scores, the iPhone received a higher score than the Galaxy. As shown in Table 3, the median and average were higher for the iPhone than for the Galaxy and the difference was statistically significant. Therefore, it can be assumed that consumers who use the iPhone generally have a more demanding condition when they repurchase their smartphones than Galaxy users.

Table 3

Brand	Average	Standard Deviation	Median	Observation	F
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iPhone	17.959	5.477	16.000	49	14.35***
Galaxy	14.255	4.247	14.000	51	
Total	16.070	5.207	15.000	100	

\*, <0.1, \*\*, <0.05, \*\*\*, <0.01

### 3.3.2 Repurchase Intention

Table 4 below shows the results of the questionnaire survey on whether the 100 smartphone users would be willing to repurchase their current brands. The iPhone users averaged 4.041 points, while the Galaxy consumers' average was 2.922 points higher than iPhone. This difference was statistically significant (F = 8.08). Even if

a new product does not fit with the time to buy a smartphone, iPhone consumers would wait at 3.245, while Galaxy users would have a slightly lower score of 2.510. Waiting for new products was also different between the iPhone and Galaxy (F = 6.56). Overall, iPhone users were more likely to repurchase an iPhone.

Table 4

Standard	Survey Question	iPhone	Galaxy	F
Repetition Homeostasis	I will always buy new products from this brand.	4.041 (2.140)	2.922 (1.787)	8.08***
Waiting for New Products	I will wait without purchasing another brand to purchase this brand.	3.245 (1.507)	2.510 (1.362)	6.56**
Total Frequency		49	51	100

\*, <0.1, \*\*, <0.05, \*\*\*, <0.01

Parentheses show standard deviations

	Repetitive Homeostasis			Waiting for New Product		
	Do Not	Do	Total	Do Not	Do	Total
iPhone	21	24	45	32	9	41
	(27.6)	(17.4)		(34.9)	(6.1)	
Galaxy	33	10	43	42	4	46
	(26.4)	(16.6)		(39.1)	(6.9)	
Total	54	34	88	74	13	87
	chi <sup>2</sup> (1)=8.390***			chi <sup>2</sup> (1)=2.997*		

\*, <0.1, \*\*, <0.05, \*\*\*, <0.01

Parentheses show the expected frequency

In order to determine whether the repurchase was dichotomous, a 7-point questionnaire for repurchase homeostasis is always repurchased except the usual (very yes: 7 ~ it is: 5) and not (not at all: 1 ~ Table 4 shows the relationship between the brand and the smartphone brand. Twenty-four of the 45 iPhone users stated that they will continue to buy iPhones, while only 10 Galaxy users stated that they would continue to buy Galaxy phones. iPhone consumers seemed to be more likely to repurchase than Galaxy consumers, but whether they will continue to repurchase will be statistically relevant to smartphone brands. After switching to a bimonthly variable, such as

whether to wait for a new product, the iPhone users were more tolerant of the new product waiting time than the Galaxy users. Nine of the 41 iPhone buyers said that they would wait for the new iPhone, while only four of the 46 Galaxy users said they would wait. Therefore, a statistically significant difference existed in regard to whether to wait for new product launches between iPhone and Galaxy customers.

iPhone users are more demanding consumers and the iPhone, which has passed strict consumer requirement tests, tends to be repurchased. In conclusion, the iPhone meets more demanding consumer needs than the Galaxy,

and the impact of the iPhone on the repurchase will be higher than that of the Galaxy. In this context, it is less meaningful to compare iPhone and Galaxy when discussing smartphone repurchase selection criteria and repurchase intention. It is more appropriate to see whether a repurchase selection criterion strengthens a repurchase intention more strongly, or whether a repurchase choice is stronger than a repurchase intention.

### 3.4 Effects of Repurchase Selection Criteria on Repurchase Intentions

#### 3.4.1 Intention of repurchase by repurchase selection criteria

In regard to the five criteria that we consider when repurchasing smartphones, the most important criteria are different for each consumer. Table 5 is an empirical analysis of which purchasing criteria are the most important related to purchasing based on brand and whether to wait for a new product.

Table 5

		Whether Repetitive Homeostasis			Waiting for New Product		
		Coefficient	Standard Error	z	Coefficient	Standard Error	z
1st Place In Repurchase	Price	-1.713	0.524	-3.270***	-0.343	0.631	-0.540
	Marketing	-0.895	0.556	-1.610	0.471	0.447	1.050
	Corporate Image	-0.496	0.377	-1.320	-0.374	0.452	-0.830
	Durability	-0.879	0.412	-2.130**	0.168	0.406	0.420
	Design	-1.049	0.424	-2.480**	0.090	0.458	0.200
Brand	Galaxy	-0.835	0.305	-2.740***	-0.962	0.372	-2.590***
Brand Recognition	Affirmative	0.013	0.096	0.130	0.196	0.102	1.920*
Personal Characteristics	Age	-0.316	0.147	-2.150**	0.292	0.162	1.810*
	Education	0.028	0.134	0.210	0.353	0.147	2.390**
	Income	0.021	0.104	0.200	-0.302	0.130	-2.320**
A Constant		1.837	0.978	1.880*	-3.160	0.977	-3.230***
Observation		88			87		
Wald chi <sup>2</sup>		20.94			20.72		
prob > chi <sup>2</sup>		0.0215			0.0231		
Pseudo R <sup>2</sup>		0.2000			0.2170		
*: <0.1, **: <0.05, ***: <0.01							

As a result of analyzing the degree to which the current smartphone brand will be repurchased intact, it is analyzed as a binary variable. The results showed that a consumer who considers the price more than the quality of the product, the consumer who reviews the durability, In comparison, it was less likely to repurchase a brand steadily. In particular, consumers who have stated that pricing, rather than quality, is a priority for their repurchase intentions are less likely to continue purchasing a product. It is unlikely that consumers using

Galaxy phones will continue to purchase Galaxy phones. Even if they control this, consumers' selection criterion plays an important role. It is noteworthy that it is difficult to say that a willingness exists to repurchase a brand because it is positive about the smartphone brand that you use. Consumers who are willing to continue using a smartphone brand are likely to be younger. On the other hand, the priority of the repurchase criteria did not affect whether the consumer delayed his or her purchase until a new product was released. It is also possible to speculate

that, as new products come out late, other influencing factors are likely to work on the consumers' rational selection criteria.

On the other hand, consumers with a positive perception of a brand may feel that they would be willing to delay their purchase until the new products are released. iPhone users were more likely to delay their purchases than Galaxy users. In addition, the older and more educated the consumers were, the longer they were willing to wait for new products. However, consumers with high incomes were more likely to not wait for new products.

#### 3.4.2 Repurchase depending on strictness of selection on repurchase

Table 6 shows how strictly the conditions are taken by consumers when they repurchase their smartphones affect the repurchase of the same brand. The strictness score for the repurchase criteria was calculated by summing the

scores of the five criteria and adding whether the repurchase intention was to repurchase consistently, as shown by the binomial variable.

As the dependent variable is a binomial variable, the probit model shows that consumers who strictly follow the repurchase criteria are more likely to purchase certain brands continuously. In other words, consumers who are staunchly considering repurchase terms are likely to maintain their current smartphone brands.

However, because the recognition of the brand is positive, the intention of repurchasing did not necessarily increase. It can be said that judgments based on substantive standards are more effective than personal appeals from brands. Galaxy users have low repurchase homeostasis and consumers' personal characteristics, such as age, education, and income, do not affect repurchase homeostasis.

Table 6

		Probit General Model			Probit Tool Parameter Model		
		Coefficient	Standard Error	z	Coefficient	Standard Error	z
Repurchase Criteria	Strictness	0.077	0.031	2.510**	0.164	0.073	2.240**
Brand	Galaxy	-0.523	0.315	-1.660*	-0.039	0.564	-0.070
Brand Recognition	Affirmative	-0.043	0.088	-0.480	-0.093	0.091	-1.020
Personal Characteristics	Age	-0.244	0.139	-1.750*	-0.232	0.127	-1.830*
	Education	0.028	0.132	0.210	-0.014	0.133	-0.100
	Income	0.060	0.106	0.570	0.103	0.110	0.930
A Constant		-0.688	0.932	-0.740	-1.941	1.470	-1.320
My Creation Wald Test		-			chi <sup>2</sup> (1)=0.96		
Observation		88			88		
Wald chi <sup>2</sup>		17.39			27.09		
prob > chi <sup>2</sup>		0.0079			0.0001		
Pseudo R <sup>2</sup>		0.1529			-		
*: <0.1, **: <0.05, ***: <0.01							

It is very likely that consumers who have strict smartphone selection criteria carefully examine various conditions when they select brands. If such brands are selected by the consumers, then it is likely that it will lead to repurchase. In other words, there may be a mutual causal relationship between the strict selection of consumers and repurchase. In order to control this, a probit IV model was used to remove the endogeneity between the two variables using instrumental variables. Tool variables can affect consumers' selection criteria for

smartphone reprints as "I know the brand image even in unexpected situations," which is how consumers judge the brand's accuracy. The results of the probit tool model analysis were derived from the same general model as the probit model.

The reason for this is that the intrinsic wald test is not statistically significant (chi<sup>2</sup> = 0.96), unlike the prediction, it is not related to the strictness of repurchase choice and the mutual causal relationship between repurchase intimacy. If you follow repurchase strictly,

then you are likely to keep your brand the same, but, if you continue to buy one brand, you will not necessarily be able to strictly opt for repurchase.

The next repurchase intent is to wait for a new product. Table 7 shows the results of the binomial analysis. The probit general model results show that consumers who strictly observe repurchase criteria are more likely to

delay purchasing until the brand new product appears. People who are more highly educated are more likely to invest more time in purchasing new brand products that they use, while those with higher incomes are less likely to spend the same brand because they are more likely to wait.

Table 7

		Probit General Model			Probit Tool Parameter Model		
		Coefficient	Standard Error	z	Coefficient	Standard Error	z
Repurchase Criteria	Strictness	0.061	0.037	1.660*	-0.127	0.045	-2.820***
Brand	Galaxy	-0.647	0.401	-1.610	-1.270	0.343	-3.700***
Brand Recognition	Affirmative	0.139	0.104	1.330	0.223	0.094	2.370**
Personal Characteristics	Age	0.229	0.164	1.390	0.188	0.149	1.260
	Education	0.301	0.148	2.040**	0.267	0.114	2.340**
	Income	-0.274	0.134	-2.040**	-0.243	0.111	-2.190**
A Constant		-3.593	1.036	-3.470***	-0.349	1.053	-0.330
My Creation Wald test		-			chi <sup>2</sup> (1)=6.08**		
Observation		87			87		
Wald chi <sup>2</sup>		19.58			24.52		
prob > chi <sup>2</sup>		0.0033			0.0004		
Pseudo R <sup>2</sup>		0.2289			-		
*: <0.1, **: <0.05, ***: <0.01							

However, if there is a mutual causal relationship between repurchase criteria and waiting for new products, the results are reversed. In contrast to the Probit general model results, in which consumers who are demanding at the time of repurchase are more likely to wait for new products of the same brand, consumers who strictly propose standards in the probit tool parameter model were more likely not to wait for the launch of new products. In order to judge which result is appropriate, it is necessary to clarify whether the premise assuming the probit tool model is valid. The purpose of applying the probit tool model is to control when there is a mutual causal relationship that consumers who wait for new product launches may have a difficulty in purchasing decision criterion even though consumers with strict repurchase criteria are likely to wait for new products.

When the brand decision level of the consumer is used as a tool variable, then the chi2 of the Wald test is 6.08 as shown in Table 7, indicating that a mutual causal relationship exists between the two variables. Therefore,

it is more appropriate to apply the probit tool parameter model than the probit general model.

Smartphone users with positive brand recognition were more likely to be willing to wait for new products. Even hard-to-buy consumers have an affinity for and interest in a particular brand and might think that they are suffering from the pain of waiting for a new product. Each brand user responds differently to new product launches and iPhone users were more likely to take a more generous attitude until the next new product comes out of Galaxy.

#### 4. SUMMARY AND IMPLICATIONS

The purpose of this study was to clarify the relationship between consumer choice criteria and repurchase intentions in smartphone repurchases. Repurchase intentions in this study were defined as a consumer's intent to repurchase his or her existing smartphone brand and, if so, whether he or she would be willing to delay his or her purchase until a new product was released. When re-purchasing smartphones, each consumer's selection criteria is price. Marketing. Corporate image. durability.



Design, and how strongly consumers are reviewing these conditions. In addition, we tried to reflect the characteristics of the consumers using iPhones and Galaxy phones as they account for a significant portion of the smartphone market.

First, specific consumption selection criteria during repurchases inhibited the persistence of repurchase. Specifically, consumers who looked at price, durability, and design conditions when repurchasing their smartphones were less likely to repurchase a particular brand than consumers who did not. Therefore, it can be inferred that price, durability, and design are factors that promote the movement of consumers between smartphone brands.

However, when re-purchasing smartphones, consumers' behaviors related to waiting for new products could not be explained based on a consumption selection basis as the timing of new product launches is influenced more by other factors. In particular, positive perceptions, such as favorability and interest, toward previously used brands have contributed greatly to delaying purchases, even if the launch of a new product is late.

Second, consumers who strictly follow the conditions of smartphone repurchase are more persistent in repurchase, but tend to wait for new product launches. While consumers have to look more closely at buying smartphones, it is up to consumers to examine the criteria in detail. In other words, even with the same criteria, purchasing decisions can be made on a more stringent scale. The analysis results showed that consumers who decided to purchase such a product are continuously consuming the brand once they decide to purchase the product. Yet, these consumers were not generous with the delay in launching new products. No matter how thoroughly you look after your brand, even if it is a brand that you are using and willing to continue purchasing in the future, if you do not release a new product on time, you are more likely to move to another brand. New products must be launched quickly and on time in the smartphone market to ensure purchase by current users.

Our results showed that no differences were found between the smartphone repurchase selection criteria and the repurchase intention. In general, iPhone users were more selective than Galaxy phone users and their repurchase intentions were stronger. Therefore, although the selection criteria and strictness of consumers in the brand may impact the degree of repurchase, no specific trend existed for either brand. In addition, the positive perception of the brand did not play a decisive role in the repurchase of the brand. Consumers do not necessarily buy brands because they have an affinity for the smartphone brands they use. Instead, the brand new product had a positive impact on persevering that period even if it came out somewhat late. In summary, the scope of the consumer for a specific brand is fixed to some extent and the brand recognition plays a more decisive role in loyalty to the brand product than to the repurchase itself.

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